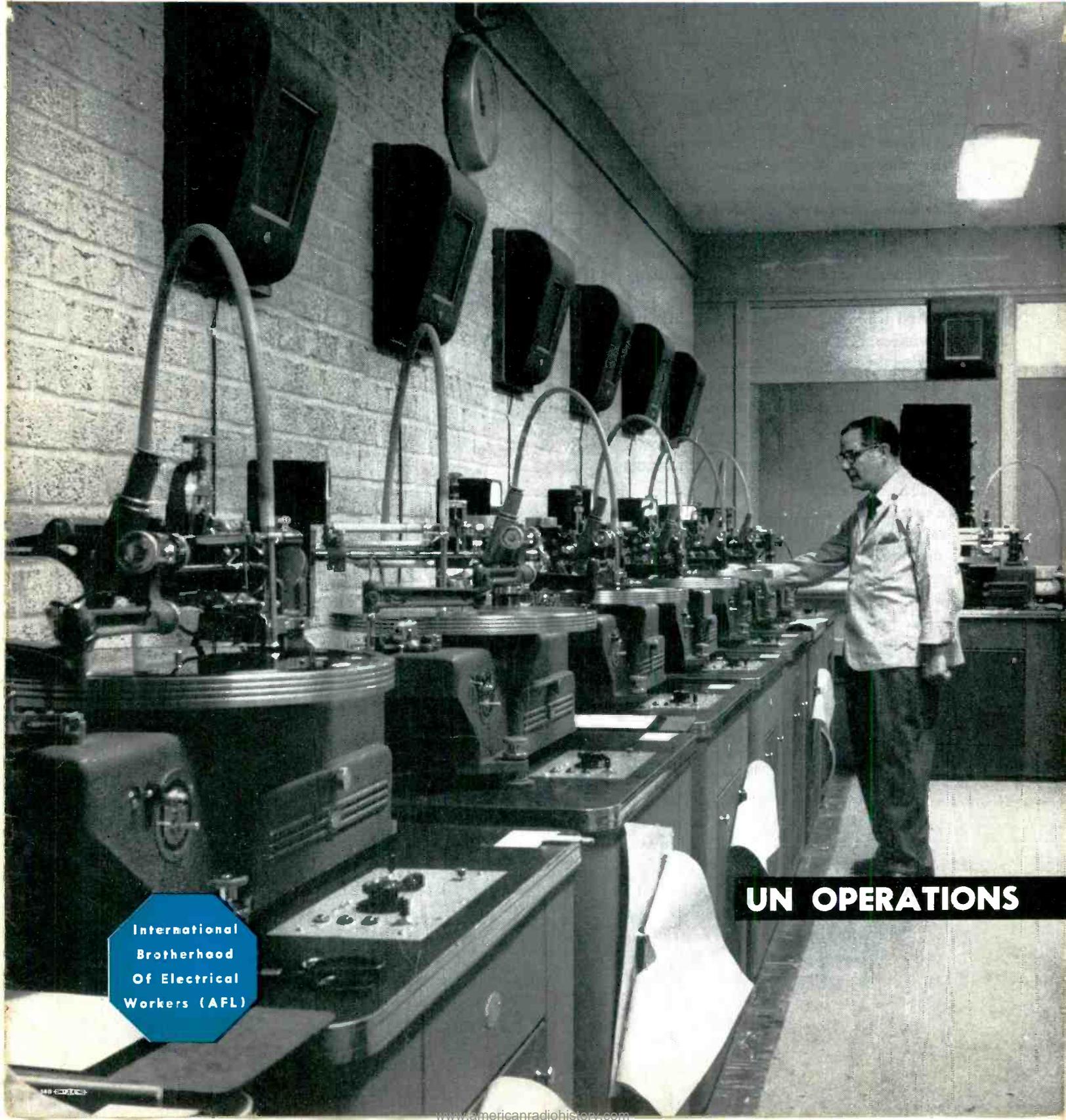


RADIO, TV and RECORDING



APRIL, 1952

TECHNICIAN-ENGINEER



UN OPERATIONS

International
Brotherhood
Of Electrical
Workers (AFL)

Broadcasting Engineers May Judge Well The Sincerity of the 1952 Candidates

By D. W. TRACY, *President, International Brotherhood of Electrical Workers*

FEW men in the ranks of Organized Labor have a better opportunity to see their Congressmen and their state legislators in action, as they mold public opinion, than do the members of the broadcasting division of the International Brotherhood of Electrical Workers.

As they handle the broadcasts of a campaign speech, the recordings of a message to constituents, and the staging of a television panel discussion, they can judge for themselves the self confidence of Senator So-and-So and the sincerity of Congressman Doe. When there is a live audience, they can determine the appeal of the legislator's statements and the reactions of John Q. Public.

And while they are seeing and hearing these representatives of the rank and file of citizens, they are serving the complex instruments of communication which tie the elected representatives to the voters. The opportunity for a candidate to speak directly to the voters is made possible by the skill of the broadcast engineer.

Duties Seem Humdrum

The regular duties of a studio set-up, a simulcast or a special event often seem humdrum to a man who has to perform these tasks day after day, but if he will stop and think of the great value of his occupation, especially in a general election year such as 1952, he will be proud that he is a broadcast engineer. Endless words and voices flow through cables around him . . . words of humor, words of wisdom, facts and more facts. His education did not stop when he left the school curricula. It goes on day after day. Of course, many of the scripts and much of the continuity is so much verbiage, but, if the broadcast engineer is quizzed on his knowledge of current affairs, especially, he will find that he stands up well even with most of the news commentators he monitors or transmits each day.

Because he is technically skilled and well acquainted with current events, he has an opportunity to serve the nation this year as few working men have.

Next summer, many of his number will be faced with the tremendous job of bringing two big nominating conventions to the people. He learned how to cover a radio network broadcast of such an event four years ago. Other conventions had been broadcast before

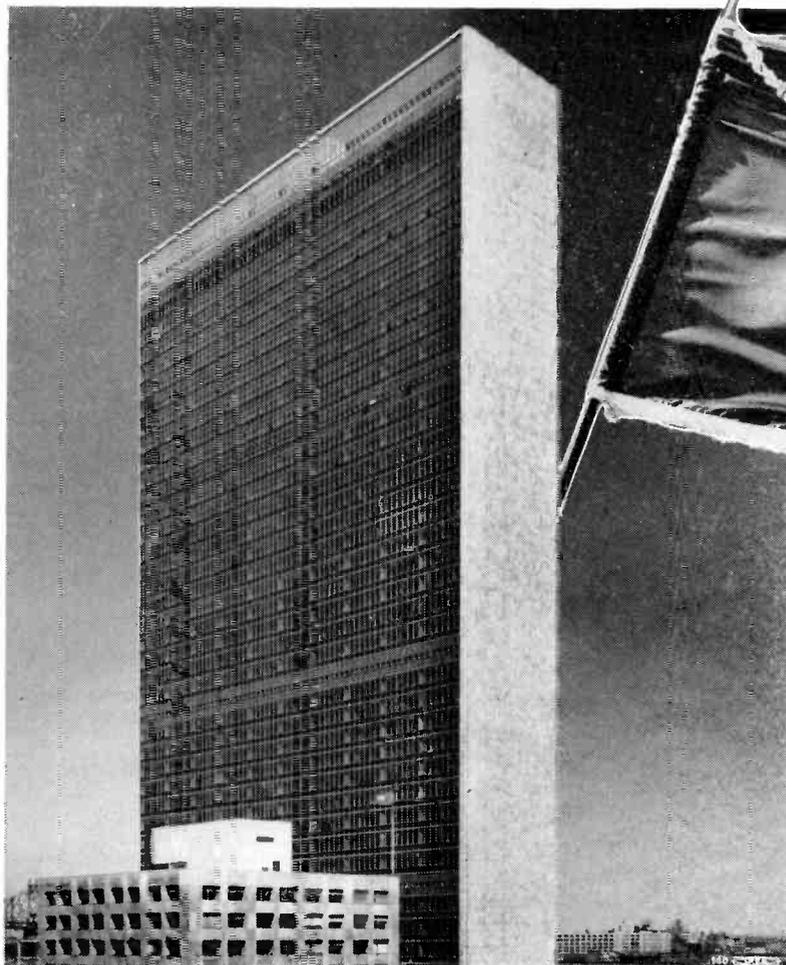
1948, but none so well. Mikes were on the convention floor, in hotel rooms and lobbies, on the convention platform. Colorful commentary came from broadcast booths, but TV coverage was relatively limited.

This year, television opens up still more possibilities for the engineer's talents. Networks will be in a heated competition to present the best telecasts of the conventions, and much of value to the American people will come from it. Many writers are predicting that TV coverage will "expose" the shortcomings of a nominating convention to the American people and cause them to demand primary elections in every state. If this should come about, think of the tremendous change which your industry will have wrought upon the American system of democracy.

Civic Duty to Perform

Let me urge that each one of you look upon any political events on your program schedule this year as a civic duty to perform well. Fewer and fewer Americans are going to the polls and voting on election day. In 1948 only 51 per cent of the eligible voters cast ballots. In other words, almost half of the nation let the other half of the nation decide its government, and, as a consequence, its manner of living. Many turn away from the polls because they know little about the candidates or because they do not understand the issues involved. Radio and television will eventually lay the facts before each voter. The hypocritical candidate will find himself in the public spotlight as never before, and his campaign promises will face closer inspection. We must help this year to bring the electorate closer to their government and encourage them to participate in it.

As a final thought, let me urge you to go further during this significant year and register as a qualified voter. The International Brotherhood of Electrical Workers, your division, and all of Organized Labor have many issues pressing for action by a liberal Congress. Congress has pretty well ignored much Labor-supported legislation during the last two or three years, because Labor did not prove its determination and its strength in the 1948 elections. We have to prove our interest this November with ballots in the ballot boxes . . . regardless of who our favored candidates may be.



Eyes and Ears of the UNITED NATIONS

SINCE the United Nations charter prevents direct UN relations with a labor organization, radio and TV operations for this world sounding board are handled by private contract. IBEW Local 1212 supplies technical personnel for UN operations under a sub-contract with this UN contractor.

Securing the initial contract at the start of UN operations at Hunter College in 1946 was accomplished only through very effective teamwork by our members, our business manager, and the invaluable aid of Local 3, IBEW.

Late in 1946, UN operations moved from Hunter College to Flushing Meadows (the old World's Fair site), and then to Lake Success in Nassau County. All committee meetings were held at these locations, sometimes with as many as eight sessions underway simultaneously. With the UN, comprised of some 60 member nations, the meetings are obviously multi-lingual. This provided many difficult audio distribution problems to be successfully solved by our members. The increased

scope of activities brought about a great expansion of facilities—and competent personnel to handle them.

In May, 1951, the UN moved to its permanent headquarters in mid-Manhattan, where all its operations are now being conducted.

The work performed by our members at the UN is comparable to that of the most complex network operations. Networks presently served by our programs include Yankee, Mutual, WNYC/Continental FM, Liberty and others.

In addition to this we provide daily programs for Europe, the Middle East, China, South America, New Zealand, Australia, Philippines, Russia and Iceland. Our programs are as varied as any produced in the broadcasting industry today.



Frank Brooks at the Ampex tape machines, putting a United Nations program on tape.
(Continued, page 6)

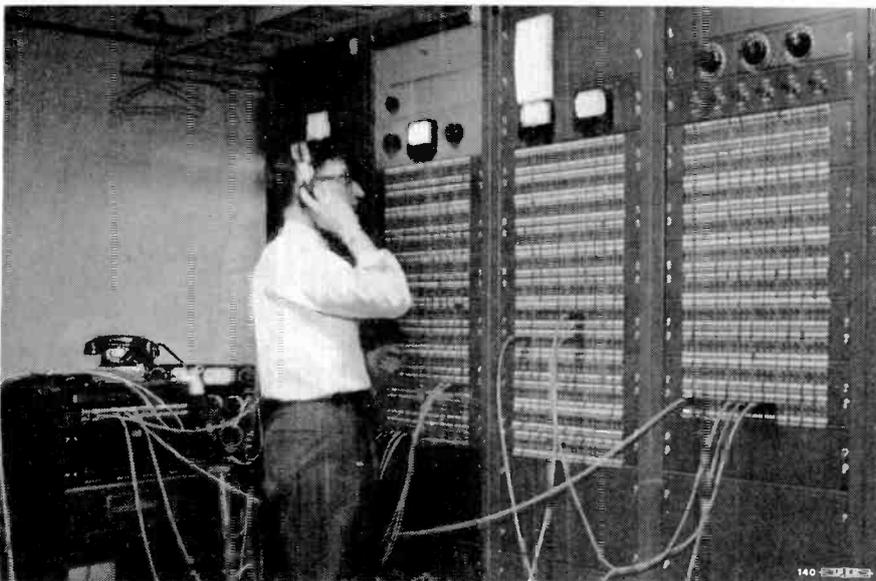
By Athan Cosmas, Vice President, LU 1212
Bro. William H. Bauer, Card No. 931342
Bro. Andrew J. Draghi, Card No. X49563
Photos by Bro. Lou Levy



The keys of the console are arranged to conform with the seating arrangement for delegates. Engineer Bob Robinson on duty.



Walter Grace at the dual-program General Electric console. The control room has full view of the studio and latest equipment.



Irwin Einsohn of Local 1212 checking up on a feed in Master Control.

SPOTLIGHT ON THE UN

"The United Nations calling the peoples of the world . . ."—with this phrase UN broadcasters are trying to reach radio listeners in every nation, urging them to support the cause of international peace and security. Helping to make this noble ideal possible are members of your IBEW.

COVER PHOTO

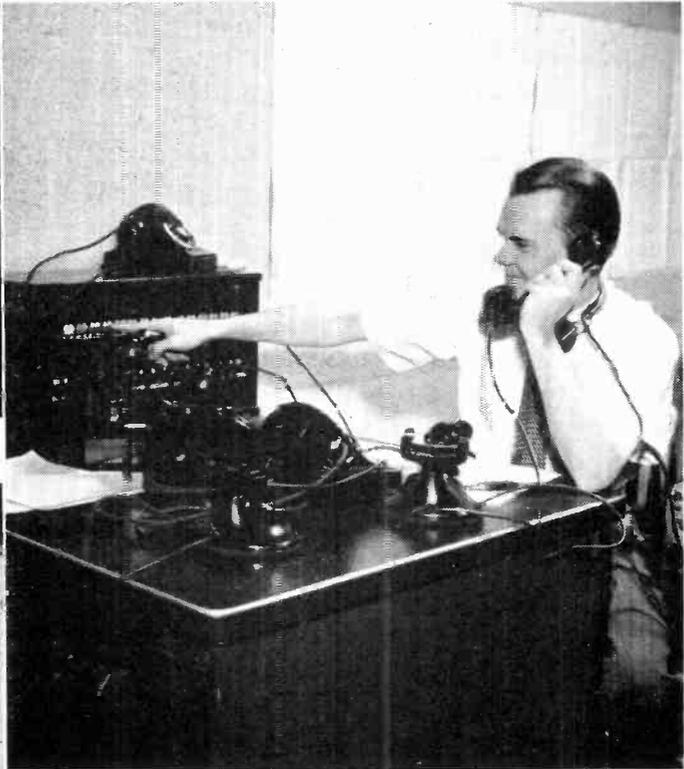
Vince Kane, one of the masters in the recording business, dropping the cutter for another platter. This is a view of the UN recording studio.



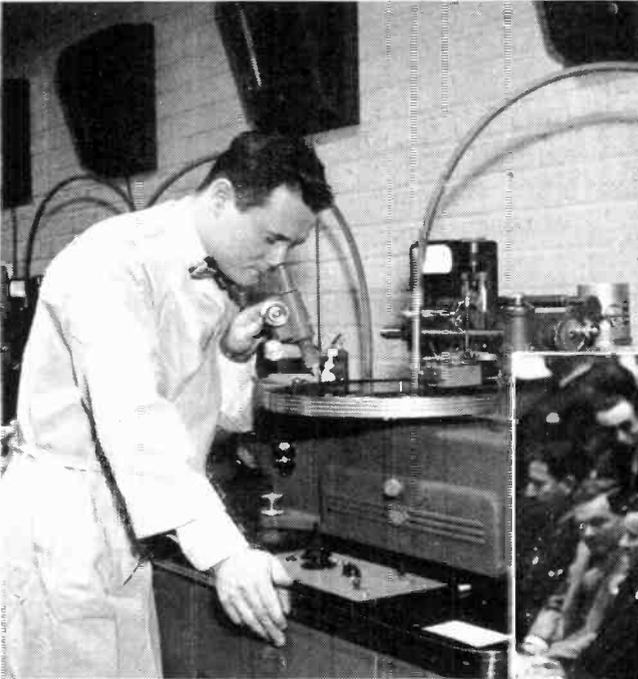
Mr. Meredith of the UN Radio Division had just returned from Korea and is making a report at the mike.



One of the pretty señoritas from the Latin American section of UN Radio gets set for a recording.



Met Hanson at the switchboard in Master Control.



Another Loca 1212 member, Ed Brady, checking the grooves at a Presto turntable.



American delegation, rear, British delegation, foreground, at an Assembly session.



High Voltage at Security Control.

UN, continued

Some are broadcast "live," while others are transcribed on tape and disc. As a matter of fact, a major portion of our work schedule is devoted to tape and disc recording and editing. Disc, tape and sound-scriber recordings are kept on file in our large recording library. The latest Presto and Ampex recording equipment is in constant use at headquarters, while Magnecorder and Mini-tape units are used for remote pick-ups.

Equipment for UN operations includes Langevin, Fairchild, Audio Development, Altec, Cinema Engineering, RCA turntables and amplifiers; Raytheon and General Electric consoles; Hewlett Packard and General Radio test racks; plus other programming, test and measuring equipment too numerous to be mentioned here.

Conference Work Differs

While there is some similarity to broadcasting work, conference work differs in some of its ramifications from our regular network operations. When representatives of all 60 UN member countries are seated for a meeting they need at least 35 microphones. The Conference Room console provides keys for control of these microphones, plus many additional keys for the numerous public address and monitoring line set-ups. Both high-and low-level mixing is used. The control engineers also ride gain on the multi-lingual translation channels which distribute the pick-up to interpreters, delegates, audience, recording rooms and to radio networks.

Some idea of the problems involved can be gained by a brief consideration of only one phase of the operation—the multi-lingual translation channels: when a delegate is recognized by the Chair, his voice must be immediately picked up for relay to the interpreters who simultaneously translate into one of five additional languages for re-distribution to all the other delegates. Thus the delegates can listen to the speaker in his native tongue or in any one of the five additional languages carried in the system. Split-second timing is required in the handling of these feeds, along with those to recording secretaries and to other channels. Besides this, the control engineers also keep a log listing the nationality of each speaker and the duration of the speech.

As in broadcasting, recording plays a major role both for UN archives and for later transmission on both UN and Network programs. Both disc and tape "masters" are made for processing and copies are distributed all over the world.

In 1950 our UN members successfully met the new problems posed by TV coverage of UN proceedings. Television gave a great impetus to public interest in the UN and its important work. The programs were widely acclaimed by both the press and the public. With the UN now in its permanent headquarters, we anticipate

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D. W. TRACY
President

J. SCOTT MILNE
Secretary

VOLUME I



NUMBER 4

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PRINTED ON UNION MADE PAPER

an expansion of television production. While this expansion probably will not equal the networks in operational time, nevertheless it will provide many opportunities for our members to display their skill as they keep pace with all developments in the art.

Our members have also handled UN 16 mm and 35 mm film projection.

Because of their wide experience in United Nations sessions audio, recording, broadcast and associated problems, some of our members have been on foreign assignment for the UN to such places as Paris, Havana, Santiago, Montevideo, etc.

Construction and modification of specialized equipment and its proper maintenance have become ever-increasing functions that parallel the expanding activities of the United Nations.

While we may seem to be blowing our own horn, this brief description of our operations proves that point that our 1212 staff at the United Nations is not only competent but versatile as well.

NABET Loses Five-to-One In NLRB Election at WFMY-TV

Station engineers and technicians at WFMY-TV, Greensboro, N. C., voted five-to-one against representation by the National Association of Broadcast Engineers and Technicians (CIO) in an election held under supervision of the National Labor Relations Board.

Lewis Wolberg, examiner from the Winston-Salem, N. C., regional office of NLRB, conducted the election.

Balloting was on the question of whether NABET should be certified as collective bargaining agent for the engineers. In announcing the results, Gaines Kelley, general manager of the station, said the station was represented in such matters by Mortimer H. Freeman, an Atlanta attorney.



WSPD truck being set up for a remote from the Toledo YMCA. Atop the truck are Billy Parker and Chet Slaughter.

TOLEDO

Progressive Broadcasting Facilities
Of Bustling Ohio Manufacturing City
Are Manned 100 Per Cent by IBEW Men

LOCATED at the southwestern tip of Lake Erie and at the mouth of the Maumee River is Toledo, Ohio, famed as the "Glass Capitol of the World." Boasting a population of more than 300,000, Toledo is the home of the Libby-Owens Ford Glass Co., the Owens-Illinois Glass Co., the Owens-Corning Fibreglass Corp., and Glass Fibres Company. Toledo is also the home of the Electric Autolite Co., Champion Spark Plug Co., the Toledo Scale Co., the Willys Automobile Mfg. Corp., the Vilbiss Spray Co., and many others.

Toledo, however, is also known as a center of culture and its citizens point with pride to its famed Museum of Art, fifth largest in the United States, and its Zoo, considered one of the finest in the country.

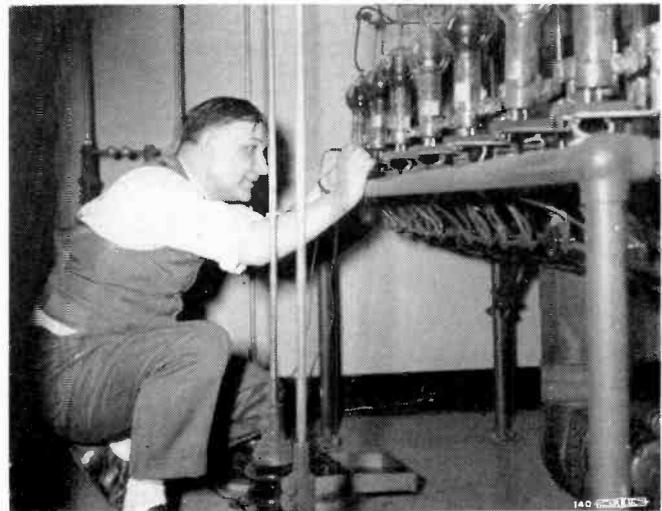
This great city is served by three Radio Broadcasting stations—WSPD, WTOD and WTOL, each having a sister FM outlet, and WSPD-TV provides the citizens of Toledo with its Television entertainment. The Toledo Board of Education serves the public with an educational FM station, WTDS. An outstanding fact con-

cerning Toledo broadcasting stations is that ALL stations use IBEW engineers. These are members of Local 1218 which serves Detroit and Toledo and vicinity. Headquarters for Local 1218 are located at 13117 La Salle Blvd., in Detroit.

WTOD, which began operations in 1945, is owned and operated by the Unity Corporation, Edward Lamb, president. It is truly on the "top spot on your dial" in Toledo, operating on a frequency of 1560 Kc. Its modern studios are located on the 6th floor of the Lucas County Bank Building and is generally known as Toledo's Sports Station since a great deal of its program time is filled with the broadcasting of all types of sports events. The two transmitters are located on Arlington Avenue in South Toledo. WTOD's General Manager is Sunne Miller, and by creative programming and consistent promotion this broadcast station has contributed greatly to the listening pleasure of the Toledo people. Chief Engineer Robert Sowers and his staff of IBEW engineers take care of the technical operations of this station.



Paul Shaw replacing a final at the WSPD AM transmitter.



Francis Frepple checks the AM transmitter power supply.

Toledo Facts

Toledo is a bustling Lake Erie port, ranking 43rd in the nation in population, with 392,626 citizens in its metropolitan area. Operating under a city-manager form of government, the city boasts a Museum of Art founded in 1901 with one of the most complete collections of ancient glass ever assembled. It has large oil refineries, glass manufacturing plants, and automobile component industries. The famed Anthony Wayne high-level bridge crosses the Maumee River at Toledo.



Walter Dettinger and Bernard Shonebarger in the office of the WTOD transmitter.



A view of Station WTOD's transmitter, complete with typewriter, turntable, and stapler.

WTRT, the FM affiliate of WTOD, was established in 1946. It operates on 250 watts and is licensed to operate for unlimited time.

WTOL, also at Toledo, first went on the air in 1938. With its present staff of 24, WTOL has doubled its space and has applied for TV station license, which will further expand this operation. Broadcasting on a frequency of 1230 Kc, its FM outlet on 104.7 Mc, WTOL is basic ABC network. Its capable IBEW engineering staff is under the supervision of Chief Engineer Harold Holmes, also a union member. General Manager is Thomas Bretherton. In 1949, when WTOL began FM broadcasting, new Western Electric equipment was installed and because of present space shortage, a 10 Kw FM transmitter is still in storage while a smaller transmitter carries on.

In the hectic days of 1928, George B. Storer purchased Radio Station WTAL, Toledo, which had begun operations in 1921 and had a power output of 50 watts. Changing the call-letters to WSPD and increasing the power output, this well-known station has grown to an

organization of almost 100 people to keep its operations going and three buildings to house all its facilities. At the present time there are twenty-six IBEW engineers at WSPD.

AM studios and control room and the "L" shaped TV studio and control room are located in the Broadcast Building on Huron Street. The TV Transmitter Building and 555-foot tower are located on a large plot of city land only four blocks from the studio. The modern and neatly landscaped Transmitter Building houses not only the TV transmitter but also the FM Transmitter. There is also a spacious tube vault, a workshop, an office and a garage large enough to accommodate the WSPD-TV mobile truck. A mobile power unit and a panel truck are also housed here.

The AM transmitter, located in a two-story building in East Toledo, operates on a frequency of 1370 Kc. and a power of 5 KW. The antenna system consists of three towers, properly phased and spaced to give the required directional characteristics.

In 1948, when WSPD entered the field of Television



Loading equipment for a remote jaunt, an IBEW engineer packs the automobile trunk.



The man behind the man behind the mike; an engineer keeps close tab on a live show.



Western Electric equipment at a Toledo station is checked by a station engineer.



WSPD engineers set up the station's mobile TV truck and power unit outside the stadium to cover a local football game.

Broadcasting, it remodeled its large AM audience participation studio to handle TV. The lighting system was designed by General Electric engineers and consists entirely of slim-line fluorescent tubes. These are wired so that any number of lighting combinations may be switched on depending upon the requirements of each particular program. WSPD is on the air with TV broadcasts from 9 a. m. until midnight while WSPD-AM broadcasts from 6 a. m. until 1 a. m. A "Fort Industry Station," WSPD operates on Channel 13. General Manager of the WSPD plant is Allen Haid; an old timer in the Broadcast industry, while technical operations are



On duty in the control room—IBEW engineers "Butch" Sprengle, Henry Pickens, Chet Slaughter, John Wiley, and Billy Parker.

under Bill Stringfellow, an experienced chief engineer.

In the preparation of this article, the following 1218 members have been extremely helpful and cooperative and deserve the thanks of the entire Toledo gang: Ed Perry, WSPD steward; Alfred Koepf, WTOL steward, and Bernard Shonebarger, WTOD steward. Many thanks also to Kurt R. Schmeisser, business manager, Local Union 1218 for his help in preparing this article for publication.

NEXT MONTH: Your Technician-Engineer will feature a picture-story on Station WBKB, Chicago, a commendable mid-west operation.

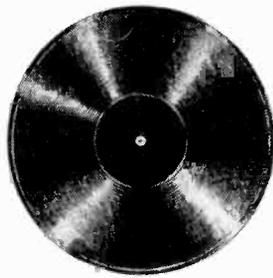


Chet Slaughter adjusting the micro-wave installed atop a fire ladder at the Fort Miami Fair Grounds. A fireman assists him.



Larry Larson and Paul Shaw work on FM transmitter's blower. Toledo engineers are highly rated for their knowledge of equipment.

the RECORD SPEAKS . . .



'Impromptu' Strike at WOW Is Example of NABET Disunity

AN "impromptu" strike at Station WOW, WOW-TV, Omaha, early this year seems to have been another case of the National Association of Broadcast Engineers and Technicians (NABET) going beyond its depth . . . and of disillusioned engineers losing out as a consequence.

The station contended that the strike grew out of the discharge of two TV employees, who shut down both radio and TV stations, January 11, for about 20 minutes allegedly for the purpose of writing grievances, *Broadcasting-Telecasting Magazine* reported. The magazine stated that 25 technical employees participated in the strike action.

Discharged Employees

"A third technician was suspended and a fourth reprimanded for their roles in the shutdown," *Broadcasting-Telecasting* said. "Discharged employees started to picket WOW properties, with most NABET members electing to respect the picket line.

"The station reports some of the NABET employees have returned to their jobs. Crews of executive and supervisory employees quickly took over the operation and have given an uninterrupted service except for the loss of 28 minutes sustaining time."

Louis J. Savara, NABET international representative, was quoted by news services as saying the union would file unfair labor practice charges against WOW, Inc. Frank Fogarty, general manager of the station, said the company would enter a complete and convincing denial of the charges. He pointed out that the NABET contract contained compulsory arbitration and no-strike clauses. NABET, he added, has agreed to arbitrate, if the company would first reinstate the discharged and suspended employees.

This the company refused to do, although it offered to put the wages in a trustee account to guarantee back pay if awarded by arbitrators.

Union officials were reported to have wired WOW and WOW-TV advertisers urging them to suspend their schedules during the strike. Mr. Fogarty reported that

NABUG Drops NABET

Because of "raiding" by the National Association of Broadcast Engineers and Technicians (CIO), that organization has been dropped from membership in the National Association of Broadcast Unions and Guilds, NABUG's New York Council Chairman Oliver Nicoll has announced.

The vote was unanimous to drop NABET, an early member of NABUG. The ousted group was charged with infringements in the past two years on TV and radio writers, directors, and scenic designers, among others. NABET action, it was said, was contrary to policy adopted by other NABUG members, called the "Little NABUG Formula": To operate under trusteeship in new areas with temporary representation, until industry trends become stabilized and jurisdiction could be solved.

Old strife was revived last fall when NABET sought membership from various engineers throughout the country, and NABUG meetings were held as early as last October to resolve the conflict amicably.

The resolution was passed unanimously by unit vote as well as by the council, composed of representatives for the American Federation of Radio Artists, Television Authority, Radio and Television Directors Guild, Association of Theatrical Press Agents and Managers, and Local 829 of United Scenic Artists of America (all AFL); Authors League of America (independent), and Radio Writers Guild (an ALA member). Representatives of the International Alliance of Theatrical Stage Employees and NABET were not present.

NABUG was organized nearly five years ago for solution of problems common to guilds and unions associated with the radio-TV industry.

the station had not received a single cancellation or request for a hiatus. AFM musicians continued their daily programs from the studios.

An ex-WOW engineer, D. Roy Glanton, took exception to the *Broadcasting-Telecasting* story. He said that the station actually lost 23 minutes on both stations, and that the time was commercial and not sustaining. Also, he added, 12 NABET technicians were without jobs; the station was being operated by strike breakers and only a few NABET men—not "a full staff of NABET technicians."

Regardless of the details and the numerical errors either way, the "impromptu" strike mal-handled by NABET is a good example of how the record speaks when a union lacks the strength of organization needed for bargaining unity.

Grand Rapids, Los Angeles: Significant Victories

The engineers employed at WOOD and WOOD-TV, Grand Rapids, Mich., voted in an NLRB election for representation on Friday, March 28, with the following result: 15 for IBEW, 9 for NABET-CIO and 2 challenged ballots.

Local Union 1295 of Grand Rapids has represented the men at WOOD for 11 years, but the representation question was raised by NABET-CIO when the owners of WOOD bought the television facilities of WLAV-TV and changed the call letters to WOOD-TV. WOOD-TV is the only television station operating in Grand Rapids and one of the five stations in the state of Michigan.

The Don Lee-Mutual engineers at KHJ-AM-FM-TV, Los Angeles, voted in an NLRB election for representa-

tion on Thursday, March 27, with the following result: 36 for IBEW, 18 for NABET-CIO and 2 for "no union."

The interest in the controversy can be judged by the ballot count, which was held on March 28. Only one eligible voter failed to cast a ballot; that voter was ill.

The sale of the original Don Lee TV station, KTSI, to CBS had resulted in the Don Lee enterprise operating only AM and FM facilities in Hollywood until the recent purchase of KFI-TV from Earle C. Anthony, Inc. The IBEW can well be proud of the re-affirmation of the KHJ engineers and the vote of confidence of the new overall bargaining unit. Negotiations by Local Union 45 will begin following formal certification by the NLRB.

HEAR YE! HEAR YE!

THE first of the annual Radio, Television and Recording Division Progress Meetings will be held on Monday, Tuesday and Wednesday, May 19, 20 and 21, 1952, in Memphis, Tenn. Each local union should make every effort to have a representative present to meet and confer with other representatives and the International staff.

As soon as details of hotel accommodations can be worked out, each local union will be solicited for reservations and suggestions for the agenda. This meeting can be made worthwhile **ONLY** by the wholehearted cooperation of the some 78 local unions. Start planning **NOW** on being represented—this is a wonderful opportunity for the membership to hear and be heard in a meeting of delegates who work in only one field—**YOUR** field!

The site of the meeting has been determined as the result of an effort to select a relatively central location, and the time is thought to be advantageous, since some local unions expressed the desire to have the meeting close to a normal vacation period but yet not in the middle of the period. The really important item, however, remains. It's our meeting—**YOUR** meeting! Mark it on your calendar—make it a **MUST!**

May 19, 20 and 21—Memphis, Tennessee

Supreme Court Studies 'Captive Audience' Case

EARLY in March the Supreme Court began consideration of the Capital Transit "captive audience" radio case involving two firms of Washington, D. C. Supreme Court justices tuned in on the arguments from both sides with considerable informality, as they sought to determine a lower court's correctness in ruling that the broadcasts violate the constitutional rights of transit passengers.

The broadcasts emanate from station WWDC's FM facilities in the District of Columbia. They are picked up by streetcars and buses of the Capital Transit Company all over the nation's capital. The passengers and the operators of the transit vehicles cannot change the reception, because the broadcasts come from a fixed speaker.

A case was brought against the transit firm, Washington Transit Radio, Inc., and the Public Utilities Commission by two transit passengers, Franklin S. Pollock and Guy Martin.

W. Theodore Pierson, Transit Radio attorney, who spoke for all three defendants appealing the lower court decision, was quizzed extensively by Supreme Court justices when he argued that the "noise level" in buses was not raised by the addition of transit radio.

'Noise Level' Question

Justice Felix Frankfurter wanted to know just what "noise level" was, and Justice Harold H. Burton commented that it seemed to be the noise "that replaces the rattle". Justice Hugo L. Black said the noise seemed to be a pretty poor basis on which to decide the case.

Pierson attacked the use of the term "forced listening" and said it was true only to the extent that Franklin S. Pollock and Guy Martin, the two passengers who brought the case, and a few others objected to the programs. He said the term had been "exploited" to imply that the radio programs—music, news, and commercials—prevent conversation, reading and even sleeping on transit vehicles.

Pierson said that a "scientific survey" showed only a small minority of riders object to the programs. At this, Frankfurter, a streetcar rider himself, wanted to know the size of the survey. When he was told that it was a sampling of 250 persons, he commented that "hundreds of thousands" ride the transit line daily.

When Justice Stanley Reed asked why riders couldn't just turn off one station and tune in another, Justice Frankfurter commented that the question "indicated that some members of the court are not a part of the captive audience."

Justice William O. Douglas wanted to know whether anyone objected to the advertising placards in street cars and busses. Paul M. Segal, attorney for Pollock and

One Moment, Please . . .



While televising a hockey game one evening, a cameraman received rare and ecstatic praise from his director.

"Terrific work! You're doing a fine job. Haven't lost the puck once. Swell. Never knew you had it in you."

The cameraman went home without a murmur, never telling his chief that the main tube of his camera had a slight imperfection which showed up as a dark spot, the size of a puck, on the TV screen.

—Barbara S. Adler in the *New York Times*.

EDITOR'S NOTE: Every station has its tales of last-minute woe . . . unexpected breaks of silence . . . listener complaints. . . . Send them to the **TECHNICIAN-ENGINEER**. We'd like to have the best ones illustrated and passed on to the membership. Mail them to **The TECHNICIAN-ENGINEER, International Brotherhood of Electrical Workers, 1200 Fifteenth Street, N. W., Washington, D. C.**

Martin, answered that signs didn't have the ability to "compel you to look at them."

Douglas quipped:

"How do you know? Some of the pictures do."

A decision on the case is not expected until late spring or summer.

At least a dozen city transit companies will be affected by the court's ruling. FM radio, which is already suffering many setbacks, will find one more outlet gone, if the court rules against the transit company.

TECHNICAL NOTES

'Equipment Ready for Big Thaw'

Materials requirements for transmitters, studio equipment, and antennas through the middle of 1953 can be met from present manufacturers' inventories and current allocation of materials without asking for increased allocations by the National Production Authority.

This fact was reported recently by a "task force" committee of the Radio-Television Manufacturers Association, which was doing a fact finding job in anticipations of FCC's lifting of the freeze on new stations.

The committee reported that the requirements for construction materials needed for new stations can be reduced to amounts presently allowed under NPA regulations by using presently existing structures and buildings.

The group predicted that 22 new VHF television stations—but no UHF stations—would go on the air during 1952. Twenty-one of these would be in cities not already served by television. During 1953, according to the committee, 171 new stations would go on the air with 64 in the UHF range.

Antenna Obscured by Clouds

British television recently added 11-million persons to its audience by pushing a lone antenna high in the Yorkshire sky.

BBC accomplished this when it opened a new transmission station at Holmes Moss, 80 miles from Huddersfield in Yorkshire, in the middle of one of Britain's wildest moors. The station has 2,000 valves (tubes), is 1,700 feet above sea level and its mast is 750 feet high. During half the year this antenna is obscured by cloud and mist, and it takes an expert steeplejack to climb it.

The new station is the most powerful in the world. Holmes Moss will not broadcast programs of its own, but will retransmit those picked up from London.

Components Up for Discussion

A government-manufacturers conference aimed at promoting improvement in the quality of electronic components has been scheduled for Washington, D. C., May 5-7.

According to J. G. Reid, Jr., of the National Bureau of Standards, chairman of the conference steering committee, emphasis will be placed upon military equipment, although all types of components will be discussed. The meeting is sponsored by the Radio-Television Manufacturers Assn., the Institute of Radio Engineers, and the American Institute of Electrical Engineers, with the active support of several Federal agencies.

'Shop Talk' Needed

TECHNICAL NOTES is intended as a section of "shop talk" by and for the readers of THE IBEW TECHNICIAN-ENGINEER, IBEW Building, open to your diagrams and your own solutions to engineering problems. In these first two issues the editors have used items of general interest, but they are anxious that you take over. Send us your own technical articles. Share your solutions and ideas with brother engineers. The mailing address for manuscripts and illustrations: THE IBEW TECHNICIAN-ENGINEER, IBEW Building, 1200 Fifteenth Street, N. W., Washington 5, D. C.

British Offer Technical Awards

To encourage the writing and publication of articles reporting technical progress and development in radio and electronics in Great Britain, that country's Radio Industry Council announces that from January 1, 1952 it will award premiums of 25 guineas (about \$75) each, up to an average of six a year, to the writers of published articles which, in the opinion of a panel of judges, deserve to be commended by the industry. Any non-professional writer will be eligible.

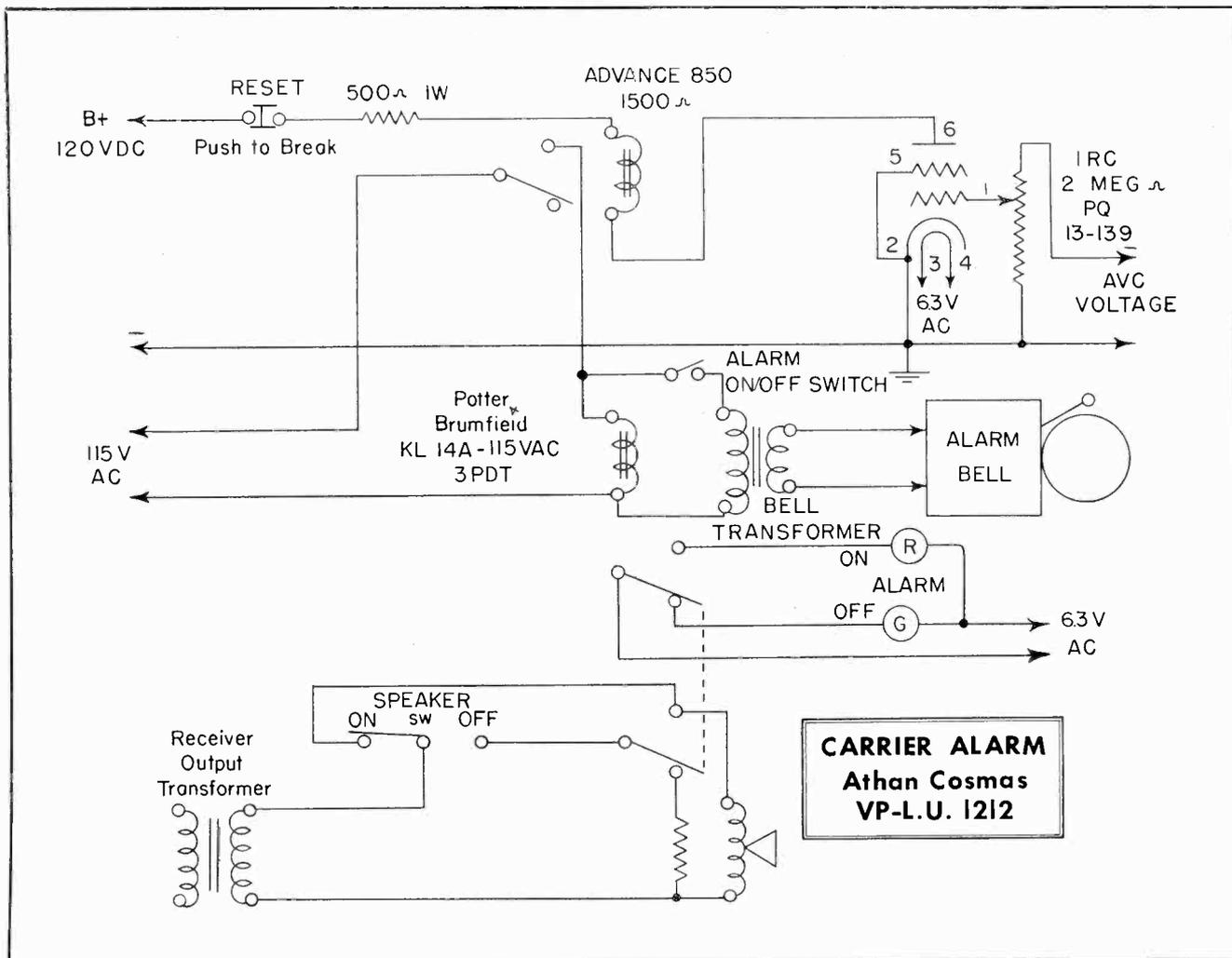
The judges are to be given the greatest possible freedom in choosing articles for awards, but they will be asked broadly to take into consideration: Value of the article in making known British achievement in radio and electronics; originality of subject; technical interest; presentation and clarity.

Picture Tube to Save Metals

New TV picture tubes designed to operate without focus coils and save important quantities of copper, nickel, and cobalt—all strategic materials in short supply—have been produced by General Electric, a company spokesman has announced.

Radio Tube For Blind Study

A giant radio tube, 30 times the size of a miniature electronic tube, and duplicating the miniature in every detail, has been produced by Mullard Electronic Products, Ltd., of London to enable blind persons to visualize how a radio tube is constructed. A running description of the tube, which can be taken apart for examination, has been produced in Braille, so that the blind can make an individual study of the tube. Many blind, and otherwise handicapped persons, are working in the electronics industry through such knowledge.



Carrier Alarm Procedure

A condition can arise wherein it may be necessary for the Transmitter Engineer to monitor another carrier as well as his own. To do this by means of two speakers is, to say the least, distracting and his primary job of carefully monitoring his own signal may well suffer.

A simple circuit for the silent monitoring of a carrier by means of a receiver is shown in the diagram. The 2D21 Thyatron is biased by a voltage taken from the AVC bus of the receiver. A carrier break will cause a removal of the bias, allowing the 2D21 to conduct, thus setting off the sequence of relays and operation of their controlled circuits.

In the circuit shown, a carrier break will do the following:

1. Extinguish the Green or "Normal" light.
2. Light the red or "Alarm" light.
3. Restore the speaker circuit to "normal" (listening), regardless of the position of the speaker switch.
4. Ring the alarm bell.

The switch in the alarm circuit can be used to cut

off the alarm bell while the carrier break situation is being investigated.

If the carrier break is one of a momentary nature, the circuits can be restored to normal by means of the "re-set" switch in the 2D21 plate circuit. With bias re-applied, a B+ interruption will cause the 2D21 to de-ionize and the circuit will return to the monitoring condition.

Always put the alarm switch in the "on" position after any re-set. The speaker switch gives the Engineer the choice of silent monitoring or aural checks as may be desired. The value of the terminating resistor used will, of course, depend on whether the break is made in the line or voice coil circuit.

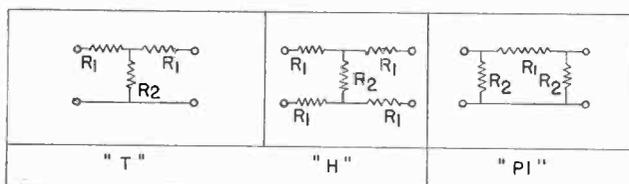
Filament and plate voltages may be taken from the same receiver supplying the bias voltage; or the unit may be operated from the conventional transformer-isolated selenium power supply.

ATHAN COSMAS,
Vice President, L. U. 1212.



FLOATING "VOICE"—In the forward portion of the transmitter room aboard the U. S. Coast Guard Cutter "Courier," State Department-sponsored "Voice of America" ship, Bernell C. Raye of Townsend, Mass., seaman apprentice, USCG, tunes the 5-kilo-watt communication and relay transmitter. The new floating edition of the "Voice" is designed to pierce the Iron Curtain with one of the most powerful collections of broadcast equipment ever assembled to break through "jamming" signals of another nation.

ATTENUATOR PADS



IMPEDANCE 600 OHMS						
Loss	R ₁	R ₂	R ₁	R ₂	R ₁	R ₂
1	34.5	5,208	17	5,208	69	10,440
2	69	2,582	35	2,582	139	5,232
3	103	1,703	51	1,703	213	3,505
5	168	988	84	988	365	2,141
10	312	422	156	422	854	1,154
15	419	220	209	220	1,632	860
20	490	121	245	121	2,970	733
30	563	38	282	38	9,500	640
40	588	12	294	13	30,000	612

—Data compiled by A. Cosmas, Vice President, L. U. 1212, from Monographs first published by F T and R in 1946.

NEXT MONTH: Athan Cosmas describes a capacity decade for the rapid selection of values in the empirical design of filters, equalizers, amplifier response experiments, etc. Also watch for a story on development of a new coaxial cable.

Teletype 'Converter' Shows Value of New Transistor

The new electronic wonder—the transistor—received its first public showing last month.

A demonstration of transistors was given at the opening of the Institute of Radio Engineers' convention in New York City.

Designed by engineering specialists of the Signal Corps Laboratories at Fort Monmouth, N. J., a new device, known as the "converter" for long distance teletype communications, incorporated several transistors in its circuits, replacing vacuum tubes almost entirely.

Capt. Gerald S. Epstein, who headed the project at Fort Monmouth, explained that it weighed 10 pounds and needed only one and a half watts of self-contained battery power, whereas its predecessor weighed 100 pounds and required 175 watts supplied by a large electric generator that had to be carried along during military field operations.

A Bit of Germanium

A transistor is a bit of "germanium" crystal housed in a convenient receptacle slightly larger than itself. One of the laboratory wonders of the last few years, it has been under almost constant refinement ever since to render it free from shocks and similar operating conditions. Captain Epstein explained this had now been accomplished, and that the converter that was demonstrated was the first practical operating unit employing transistors ever produced by the Army.

The importance of this, he went on, may be far-reaching because transistors "some day may largely replace vacuum tubes in all sorts of home radio, television and industrial apparatus." The life of a transistor, so applied, "might be as long as seven years," it was said, far more than average vacuum tube life.

D. C. Demonstration

Following the exhibition at New York City, the transistor converter was hurried to Washington, where a demonstration was held at the National Press Club to convert an overseas message from Gen. Matthew Ridgeway in the Far East from the highly complex radio waves employed to pulses that can be utilized directly by an automatic printing teletype in the capital city.

Others who worked with Captain Epstein on the converter project at Fort Monmouth were J. A. Bush and B. S. Shellholm.

Television came in for a large share of discussion at the technical symposiums. Scientists from the Bell Telephone Laboratories revealed in a series of talks that present television signals "waste much of the assigned bands" by transmitting 30 complete pictures each second, when actually only the changes of movement of persons in the pictures need be sent and received.

Station Breaks



11-Year-Olds Cast NLRB Ballots

In Chicago, the expanding television industry turned up one of the most startling developments in the history of the National Labor Relations Board. For the first time, 11-year-old children voted in an NLRB bargaining-agent election.

The election was held to decide whether TV performers would be represented by the Associated Actors and Artists, AFL, or by no union. The children were stars of a dozen TV shows. Several younger kids couldn't quite grasp the issues and were disqualified by an NLRB examiner, but the older ones showed satisfactorily that they knew what the score was. The final NLRB count showed 1,236 performers for the AFL union and only 6 opposed.

WXYZ-TV Buys 1,200 Movies

Engineers at WXYZ, Detroit, should not run short of TV films for a long time. The station's TV section has just acquired rights to 1,200 movies in the largest single purchase of its kind in Detroit TV history. The purchase represents an investment of more than \$250,000. Some of the most important movies will be used on the station's twice-a-week "Motion Picture Academy."

New Orleans, Mobile in Joint Bid

WDSV-TV, New Orleans, has joined with the Mobile, Ala., *Register and Press* (WABB) to form Mobile Television Corp., and apply for TV there in lieu of newspaper's present Channel 8 application.

NAB Attorney Confirmed to NLRB

Nomination of Ivar H. Peterson, former attorney for the National Association of Broadcasters, as a member of the National Labor Relations Board has been confirmed by the Senate without opposition. Peterson succeeds James J. Reynolds for an unexpired term of five years, ending August 26, 1956.

CBS Exhibits All-Electronic Tube

CBS has demonstrated its color television on a tri-color direct view tube, without the use of a motor-driven disc.

The demonstration at the recent Institute of Radio Engineers convention was to show that the government-approved CBS color method could be made all-electronic in its operation, with no mechanical devices.

Manufacturing Engineers to Meet

Leading electronic engineers who are members of the Radio and Television Manufacturers Association and the Institute of Radio Engineers have scheduled their next regular fall meeting for Syracuse, N. Y., October 20-22.

Working well ahead, they have also set their 1953 meeting for Toronto on October 26-28, 1953.

AFL Textile Radio Show Over WLOS

A weekly AFL radio news program, prepared and presented by the United Textile Workers of America, recently began over the radio WLOS, Asheville, N. C. Perry S. Melton, international representative of UTWA, writes and voices the program.

Peoria Station Celebrates 25th Year

IBEW engineers at WMBD, Peoria, Ill., are commemorating 25 years of station operation. The station went on the air in 1927 from a private home as a 500 w station "with sporadic programming". Now it is a 5-kw CBS affiliate. WMBD has a contract with IBEW Local 1292.

When Do-They-Sleep Department

When CBS-TV decided to put the Al Pearce Show on from Hollywood's Earl Carroll Theater, Jim Williams' crew was chosen to do the honors. Williams is audio mixer and shop steward of IBEW Local 45.

As a consequence, he wants the early birds of WBAP-TV, Fort Worth (see our March issue, *Station Breaks*), to know that the real early birds leave their nest each morning in LA.

The Al Pearce Show is seen in New York, via microwave, from 10:45 to 11:30 A.M., which is 7:45 A.M., Hollywood time. The crew call is 6 A.M., five days a week.

CBS-owned KNXT goes on at 7:30 A.M. to carry the show to Los Angeles viewers, which means that a total of 14 men must greet the dawn.

Comments Audio Mixer Williams: "Naturally, the Al Pearce crew had been closing KNXT for the past year between midnight and 1 A.M., so take a look some morning and check our focus."